



Jackson Region Fisheries Newsletter

Something Fishy in the Snake River

Each October, after Snake River flows have dropped and anglers are not out in high numbers, WGFD biologists head to the river to conduct population monitoring of Snake River cutthroat trout. A different section of the Snake River is sampled each year. Three days are spent electrofishing one section of the river. Typical sampling involves three rafts – two electrofishing rafts and one raft responsible for measuring, weighing, and marking all trout.

Sampling was conducted on the Moose to Wilson Bridge section of the Snake River in 2013. Sampling began near the south boundary of Grand Teton National Park and ended one mile downstream of the confluence with the Gros Ventre River. In years past, sampling has ended further downstream, with 5.5 to 7 miles of the river sampled. However, in 2013, sampling was stopped after 4.5 miles because so many fish were caught on the section.



Weighing and measuring fish during Snake River Monitoring

On the first day of sampling in 2013, 1,193 Snake River cutthroat trout were recorded, compared to 684 Snake River cutthroat trout on the first day of sampling in 2011. Over 500 more cutthroat were recorded in 2013, although the sampling reach was shorter by one mile. During the three days of sampling, 2,984 trout were recorded. Despite the common belief that electrofishing can capture all of the fish in a stream, we typically only sample about 10% of the fish present, particularly in big rivers like the Snake River.



5 pound Snake River Cutthroat from the Snake River

The Snake River has not been stocked since the mid-1970's and is an entirely wild fishery. For anglers interested in fishing the Snake River, 2014 should be a great year based on 2013 population numbers. Estimates of Snake River cutthroat trout over 5 inches were 832 per mile – and two Snake River cutthroat trout over 5 pounds were captured. The estimated number of cutthroat trout over 13 inches was 210 in 2013, compared to 138 in 2011. The good water year of 2010-2011 resulted in a good year class of fish and anglers should benefit during the 2014 fishing season.

Inside This Issue:

- Snake River Population Estimates
- Flat Creek Habitat Enhancement
- Mountain Whitefish
- Meet the Crew
- Lakes on the West Side of the Tetons
- AIS Update
- Share Your Moment with the Wyoming Game and Fish

Rebuilding Flat Creek

Wyoming Game and Fish Department (WGFD) has teamed up with Jackson Hole Trout Unlimited (JHTU), Wyoming Wildlife and Natural Resource Trust, National Fish and Wildlife Foundation – Jackson Hole One Fly, Snake River Fund, Patagonia's World Trout Initiative, Biota Research and Consulting Inc., and the National Elk Refuge (NER) to improve aquatic habitat for native Snake River cutthroat trout on a reach of Flat Creek. The project reach begins at the Jackson Hole National Fish Hatchery and ends at the confluence of Nowlin Creek on the NER. Currently, this reach of Flat Creek doesn't have the velocities or a connection with the floodplain to move or deposit the sediment load out of the stream bed. Fine sediments smother trout spawning habitats and fill in pools. The purpose of the enhancement is not to restore the stream to pre-settlement form, but to enhance and stabilize it within the current user demands. The project will reduce sediment inputs to the watershed, improve stream processes, and increase habitat for all age classes of Snake River cutthroat trout.



Habitat work on Flat Creek



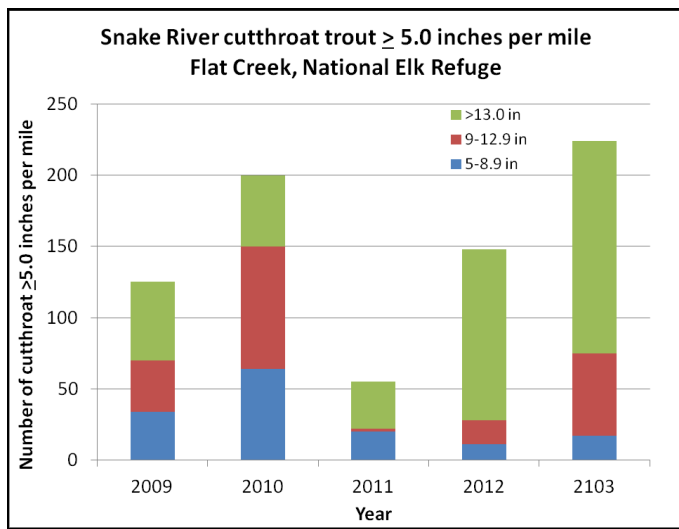
Jackson Hole Trout Unlimited
Volunteer with a Flat Creek
"lunker"

The project implementation was divided into phases over 4 years. Implementation has been scheduled to avoid cutthroat spawning, the month Flat Creek opens to anglers, elk and bison hunting and feeding, and winter range restriction. The construction timeframe is September to November of 2013-2015. Approximately 1.2 stream miles will be treated each year. The fourth year, 2016, is planned for adjustments and monitoring of the previous three years of work.

Work on the first mile of Flat Creek occurred October 14 -30, 2013. The focus was to remove and replace structures that have outlived their lifespan. A heavy equipment construction company, which specializes in stream restoration, removed 39 deteriorating instream structures and 347 feet of rip-rap, enhanced 23 riffle and 25 pool habitat units, removed 300 square-feet of invasive reed canary grass, installed 4,184 square feet of woody and sod vegetation, and created 19,000 feet of floodplain. These efforts will provide vital habitat for Snake River cutthroat trout.

The final product will be a stream with the restored form of a spring creek within the existing elk use and irrigation management. This project is utilizing the most current technology and techniques in hydrology and natural channel design. The hope is this project will be another step to strategically improve Flat Creek from the NER to the confluence of the Snake River. The future of Flat Creek will be a stream with more meanders, undercut banks and deep pools that hold more "lunkers" the stream is famous for.

The WGFD has committed to monitoring this area as they have over the last 30 years. Based on the results of monitoring, strategies will be employed in order to adjust project components to maximize ecological benefits and better achieve project objectives. WGFD biologists, NER staff, and JHTU volunteers continue to monitor Flat Creek fish populations. Fish population sampling has been conducted annually since 2009 on Flat Creek from the confluence of Nowlin Creek to the sleigh ride bridge. Numbers of cutthroat have fluctuated over that time period. In 2013, estimated numbers of cutthroat ≥ 13 in were the highest since 2009. Anglers have been successful in 2012 and 2013, with catch rates for cutthroat close to 1 fish per hour, which is considered high for a trophy fishery.



Mountain Whitefish in the Snake River Drainage

For most anglers, a mountain whitefish is not as prized as other sport fish, such as trout, primarily due to a bone structure that makes them harder to eat. However, the presence of this native fish is just as big a part of the aquatic ecosystem as all the other native species in the Snake River Drainage.

In 2010, with neighboring states beginning to notice a decrease in their whitefish populations, fish managers in Wyoming initiated a statewide effort to take a closer look at the state's mountain whitefish populations across their range. In Wyoming, mountain whitefish generally occur in mountain streams of the western part of the state, including as far east as the Bighorn Range.



Mountain Whitefish from the Salt River

Extensive population surveys have never been done in Wyoming, so biologists gathered baseline population information in order to detect any future declines. In order to survey a population, fish managers float the river in rafts equipped with electrodes that extend into the water, emitting low frequency waves, which temporarily stun the fish. This way the fish are easy to scoop up with a net and are transferred to a live well on the raft. The effects of the electricity wear off within minutes. The team stops periodically to weigh, measure, mark, and release the fish back into the stream. Each captured fish is marked by simply clipping a portion of one of its fins. By floating the same stretch of river multiple times, they record how many fish are re-captured, and from that can estimate the actual population.

Without baseline population data, biologists may not be able to detect declines until populations are critically low. Baseline population data will allow biologists to detect future declines and, if necessary, initiate management actions to reverse these declines. Additionally, understanding the state's whitefish populations is important to establish appropriate fishing regulations. For example, the creel limit of mountain whitefish was recently lowered statewide from 25 fish to 6 fish, partly due to the lack of data and trends of declining numbers in adjacent states. The population estimates conducted in recent years, along with the support of mountain whitefish anglers, allowed the Wyoming Game and Fish Department to move forward with increasing this limit back to 25 in the Snake River drainage in 2014. So far, whitefish populations have been surveyed in the Salt, Smiths Fork, Green, Wind, Popo Agie, Shoshone, Clarks Fork, and Hoback rivers with healthy populations being found in them all. The Salt River actually contains the highest density of mountain whitefish in Wyoming with 162 fish/acre.

If you are one of the many who have never thought twice about mountain whitefish, think again. Try cooking them with one of the two recipes below. Both recipes come from Norman Strung's article in the March, 1980 edition of Outdoor Life Magazine.

Smoked Mountain Whitefish

- Prepare a brine of 1 cup brown sugar, 1 cup salt, 4 crushed bay leaves, 1/2 teaspoon black pepper, and 1/4 teaspoon cayenne pepper in 1 gallon of water. Make enough brine to cover your catch, and soak the fish for 24 hours in a crock or porcelain vessel. Next, wash the fish in fresh water to remove slime. Drip dry on racks for 1 hour.
- Smoke the fish for 12 to 16 hours at 130 degrees (apple wood fuel works well). Serve with cream cheese and crackers.

Pickled Mountain Whitefish

- Make a brine with pickling salts until no more salt will dissolve. Soak cleaned and scaled fish overnight in brine. After soaking, rinse fish in fresh water and cut into chunks. Alternate layers of fish and sliced onion in a jar until the jar is almost full.
- Add spices to the jars. For one gallon of fish, add 1.5 tablespoons of peppercorns, 1 tablespoon of allspice, 1/4 teaspoon of tarragon, 4 bay leaves, 4 whole cloves, and 1/4 cup of sugar. Next, add a mixture of water and 5% acid vinegar (on a one-to-one ratio) until jar is full.
- The fish pickle in one week. They should be kept in the refrigerator and they maintain flavor and firmness for as long as four months. Make sure not to throw away the onions, they taste nearly as good as the fish.

Who We Are

Lara Gertsch, Aquatic Habitat Biologist

Elk hunting in the Big Horns, fishing Ten Sleep Creek, camping at Meadowlark and trailing cows up the mountain were all the things I took for granted growing up. My immediate and extended family took me on all these adventures from the time my mom put me in a papoose. Then I turned into a terrible teenager who couldn't get out of Wyoming quick enough. My first chance was getting accepted at a college in Washington. I spent summers in Seattle living the big city life. What I discovered was....I hate big city life. Right after graduation, with my degree in Natural Resource Science, I rushed back to Wyoming. I got a job as a fisheries technician in Green River where I stayed for seven years in different contract positions. In 2000, I accepted the Brucellosis, Feedground, Habitat Biologist job in Jackson and in 2002 I was promoted to a permanent position as the Aquatic Habitat Biologist. Now I take my daughter elk hunting up the Greys River, fishing at Stump Lake, camping at Murphy Lake and riding horses up the mountain. Wish me luck.



My Moment: The WGFD is launching a campaign that focuses on those moments in our outdoor experiences that bring us joy, inspiration and lasting memories. My favorite moment was when my four year old daughter caught her first fish. She was literally squealing like a little girl, part excited and part terrified of the frantically squirming creature on the end of her fishing line. Her dad and I tried to get her to take a picture with her first fish but she would not go near it. The only evidence of this great experience is a picture of me holding this tiny triumph. But with all moments, it's all about the journey. The journey to my daughter's triumph started when the Jackson fisheries crew decided to enhance the native fishery by using eyed eggs to recruit to the lake. The Auburn Hatchery spawned and collected cutthroat trout eggs in the early spring. Next the Jackson crew hauled those eggs and a hatching box to the lake inlet and waited for those eggs to hatch. These fish grow and sustain themselves in prime habitat through the winter. During that first Saturday in June, my daughter participated in Kids Fishing Day, where she learned about macro invertebrates, fish anatomy, aquatic invasive species, and how to cast that bobber right to where she aimed it. Then that weekend comes in July when her dad and I do our part. We bought our licenses, gathered our gear, saddled the horses, rode through the wildflowers, found that perfect spot. She checked the hatching box, launched those first ten casts, set the hook, reeled, squealed and the snapshot was taken. That journey, moment, photo, have become part of our family folklore. So with all these moments to look forward to, let's enjoy the ride.

Diana Miller, Fisheries Biologist

I would say that I've lived a charmed life. From my earliest memories, I have been surrounded by beautiful places and wonderful people. I grew up on a guest lodge on the Shoshone National Forest, just outside the east gate of Yellowstone National Park. My backyard was seemingly endless, filled with wildlife and wild places, and I took advantage of it, exploring as much as possible. Looking back on it now, I'm surprised I survived some of my younger years considering the big mountains, fast water, and grizzly bears, but I loved every moment. I'm sure it was these endless moments, as well as my parents, that fostered my love for the outdoors and wildlife. Even after my folks sold the lodge and we moved into town (Cody, WY), I continued to be interested in the natural world. When I left home and went to college, it wasn't a choice to study fish and wildlife and begin a career as a fisheries biologist, it was an extension of what my parents had been teaching me my whole life.



My Moment: One winter the entire extended family (both sides) came out for the Christmas holiday, resulting in a group of about 50 people. Most of my relatives come from Illinois and aren't exposed to the same wildlife we have here. As we were walking down the lane, looking for a Christmas tree, we heard an intense "crack" that echoed off the canyon walls. After another couple of moments, we heard another one. A group of big horn sheep were wintering near the lodge and two rams were fighting just up the hill from us. Not only was it an amazing sight to see, or sound to hear, it was amazing to watch the awe on the faces of my extended family and realize how lucky I am to live in such an incredible place. Every once in a while I start taking Wyoming for granted, and then something amazing happens, and I'm reminded that I live in the best place in the world.

Who We Are

Rob Gipson, Regional Fisheries Supervisor

Chug, chug, chug (pause). Chug, chug, chug (Fish on!!). This was a common sound during my childhood summers in Missouri fishing for largemouth bass. For those of you that have been to my office, you know I have a Jitterbug collection as a tip of the hat to my Missouri roots. Through a series of happy circumstances, I took a fisheries technician job in Casper in 1988 followed by a temporary job in Green River in 1989. While in Green River, I learned of an upcoming graduate project looking at kokanee on Flaming Gorge Reservoir. I was fortunately selected for that project and spent six months diving with the kokanee. Upon graduation in 1992, I received a permanent job with Game and Fish in Jackson. During the summer months, I hear repeatedly from tourists and friends that I have the best job in the world to which I enthusiastically agree. Besides the awe inspiring country and healthy native fisheries, it doesn't hurt that I work side by side with a very dedicated group.



My Moment

The very popular CuttSlam program was created by Fisheries Supervisor Ron Remmick. The purpose of the CuttSlam is to highlight the four subspecies of cutthroat trout in Wyoming and their native habitat. To date, nearly 1,100 anglers have completed the CuttSlam. Unfortunately Ron passed away due to cancer in 2002. The summer after Ron's passing, a group of 50 coworkers and friends gathered for four days to fish for the various subspecies. While no one actually completed the CuttSlam during that weekend, that was not the primary reason for the outing. It was more a celebration of Ron's life and his dedication to cutthroat trout management. Each time I sign off on a CuttSlam, I'm reminded of that weekend and Ron's passion for cutthroat trout. If you haven't already, maybe you will be the next one to complete the CuttSlam.

Tracy Stephens, Fisheries Biologist

Growing up in Wisconsin, I spent summers outside with family - my parents, older sister, and cousins - camping, swimming, fishing, and catching frogs. Having two daughters did not discourage my dad from making sure we were his fishing buddies, catching my first sunfish on a stick pole, ice skating with mom while he ice fished, and spending senior skip day fishing the spring walleye run. He taught me to cast, bait a hook, handle fish, drive a boat, and back a trailer. Little did I know that all of those lessons were about a much bigger picture and they would instill a love for the outdoors and an appreciation for all the opportunities to explore. My interest in the outdoors was further fueled by some great teachers - my elementary science teacher (an uncle) and my junior high and high school biology teacher, who encouraged me to attend field biology summer camps and guided me through my first field research project. Continuing my education in fisheries management and aquatic ecology was an easy decision and I was fortunate to realize a dream career that incorporated my love of the outdoors.



My Moment: My office is one of the most beautiful places in Wyoming - where countless people vacation - and I have had the opportunity to share many of those places with my family, especially my husband. One of the first projects I was responsible for after starting in the Jackson region was a survey of alpine lakes in Grand Teton National Park. This involved countless miles of backpacking to survey lakes and many unforgettable experiences - but one in particular always rises to the top. My husband accompanied me on a weekend sampling trip (as long as I carried all the sampling gear!) to Mica Lake. We had a prime camp spot with a perfect view of the Tetons - and a full moon over the Grand that night. Although we did not find any fish on that trip, I will always remember how fortunate I felt to be there with my husband sharing that moment.

Let's Go to the West Side

Looking for a weekend backpacking spot? Maybe something a little less strenuous than a Grand epic adventure? A good swimming hole, maybe a few fish? Try looking at the West Side of the Tetons. These, sometimes forgotten drainages are full of beautiful streams and lakes only a short hike away.

The Green Lakes

The Green Lakes are at the head of North Leigh Creek and are most easily accessed from the North Leigh Creek trailhead, although you can access them from a variety of trailheads if you are looking to see some different country. Most U.S. Forest Service maps only name the western-most, and largest, lake (Green Lake), but the best camping is probably found on the lake to the east of Green Lake, we call it Middle Green Lake. The trail from Green Lake, to Middle Green Lake is pretty rocky and steep (a bit rough on horses) but short. If you are hoping to do a little fishing and maybe cook some trout for dinner, stick with Green Lake. The other lakes in the vicinity are fishless. Green Lake itself was originally stocked with cutthroat in 1949. A few other occasional stocking events have ensured that the cutthroat population is maintained and currently, it is a self-sustaining population. Although these cutties don't become monsters, you could easily find a few 15 inchers lurking in this 11.5 acre lake.

The Granite Basin Lakes

The Granite Basin Lakes are at the head of South Leigh Creek and are most easily accessed from the South Leigh Creek trailhead, although, just like the Green Lakes, you can access them from a variety of trailheads. There is not a U.S. Forest Service designated or maintained trail to the Granite Basin lakes, but there is a decent user created trail that stems off of the designated trail at the head of Granite Creek. Granite Basin Lake #1 is the southwestern-most lake. The outlet of this lake falls steeply into South Leigh Creek and provides some pretty amazing views. Granite Basin Lake #2 is actually the first lake you will encounter if you access the Basin from the user created trail. Granite Basin Lake #2 is relatively shallow and your best choice for camping. Both lakes hold small populations of Snake River cutthroat trout if you are looking for a meal and some fishing opportunity. You will probably find the largest fish in Granite Basin Lake #2, but the numbers are in Granite Basin Lake #1. Both lakes were originally stocked in 1966 and maintained through additional stocking when necessary.



Granite Basin Lake #1

Hidden Lake

Hidden Lake is the closest and probably most popular of the lakes in this area. It's located about 4 miles from the Coyote Meadows trailhead. You are not allowed to camp right around the lake itself, but there are camping options close by, including a bear box east of the lake. Plan ahead to visit Hidden Lake during prime huckleberry season. The bushes on the trail and around the lake will keep you busy picking for hours. Hidden Lake has a healthy population of Snake River cutthroat that can get pretty large, up to 17 inches. Occasionally, the lake will winter kill and has to be restocked, but currently, things are looking pretty good.

Aquatic Invasive Species

As the 2014 boating season draws near, we would like to give you an update on what has been happening in the Aquatic Invasive Species (AIS) program. As you may have noticed, the AIS program made some major changes in 2013, primarily the switch from lake side to border check stations. Our technicians and inspectors worked hard to inform the public of these changes and make the transition as painless as possible. The reason for this change is to focus our efforts on inspecting out of state boats entering Wyoming that may harbor zebra mussels or other AIS. Jackson boaters can expect to see a similar program operation in 2014. The Alpine check station will be open 7 days a week starting April 26th through September 15th, an additional check station located on Hwy 89 in Star Valley will operate Thursday through Sunday, and a roving technician will inspect boats on a rotating basis across the regions lakes. As was the case last year, any watercraft entering the state is required by law to get an inspection before launching on Wyoming waters from March through November, and if coming from known infested water, year round. Resident boaters who have not left the state do not need to get an inspection unless they encounter a check station on their route of travel. A list of certified inspection locations and times of operation can be found at <http://wgfd.wyo.gov/AIS>

In the 2013 season over 40,000 boats were inspected, of which 1,515 were considered high risk; requiring a more thorough inspection. This led to 550 boats being decontaminated with hot water to kill and remove all potential AIS. A total of 14 mussel fouled boats were intercepted at the boarders and decontaminated. The Jackson crew inspected 9,189 boats across the region and performed 19 decontaminations. Another major aspect of the AIS Program is sampling and monitoring waters for the presence of AIS. Plankton tow sampling for larval mussels (veligers) at Jackson Lake, Palisades Reservoir, Jenny Lake, String Lake and Lower Slide Lake were conducted by the Game and Fish in July and October of 2013. All samples from these waters were negative, indicating no presence of mussels.



Decontaminating a boat

We would like to remind boaters in the Jackson region that zebra and quagga mussels are not the only AIS of concern to our waters. The upper Snake River has confirmed populations of New Zealand mudsnails, an invasive known to compete with native species and potentially change water chemistry. Also remember to **Drain, Clean & Dry** all boating and fishing equipment after every outing to avoid spreading this, and other, invasive organisms. If you see any suspicious plant or animal on your equipment or notice something while you are enjoying Wyoming's outdoors that you think may be invasive please let us know. You can report a sighting at 1-877-WGFD-AIS or reportAIS@wyo.gov. Boaters don't be shy, come say hello to our friendly inspectors at any of our locations, tell them about your day on the water and get a quick inspection! Thank you for your help in protecting Wyoming waters. From all of us in the AIS program, have a fun and safe 2014 boating season!



New Zealand Mudsnails

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**“Conserving Wildlife
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24th Annual Kids Fishing Day

This year kids fishing day will be held on the **7th of June at the Jackson National Fish Hatchery**. Kids fishing day also coincides with **Free Fishing Day**. Registration begins at 10:30am and all activities will be concluded by 2:00pm. A free lunch, donated by local businesses will be provided for those attending. All kids, age 13 and under, are invited to participate and parents can listen in for a great learning experience. Activities include aquatic insects, fly tying, boating safety, and fish identification.

Jackson Hole Trout Unlimited, Jackson National Fish Hatchery, US Fish and Wildlife Service, Bridger-Teton National Forest, Jackson Hole Jaycees, Teton Conservation District, Teton County Parks and Recreation Department, US Geological Survey Jackson Field Station, and Wyoming Game and Fish Department are local sponsors of the event.

Thanks to this years newsletter contributors: Diana Miller, Beth Bear, Lara Gertsch, Rob Gipson, and Tracy Stephens.

Photos by: Lara Gertsch, Rob Gipson, Tracy Stephens, and Diana Miller.

What's Your Moment?



It All Leads to **One** Moment.

The perfect sunrise.
The perfect cast.
The day's catch is less important.



Share your moment today at: <http://wgfd.wyo.gov>.